

Canadian Alpine Skiing Olympic Kelly VanderBeek moves down a hill at 1.8 m/s near the top of the hill, and then 4.2 s later she will be travelling at 8.3 m/s. What is her average acceleration?



$$\triangle \frac{\Delta V}{a \times t}$$

$$\Delta V = \frac{8.3 - 1.8}{6.5 \text{ m/s}}$$

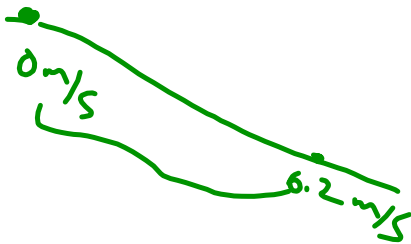
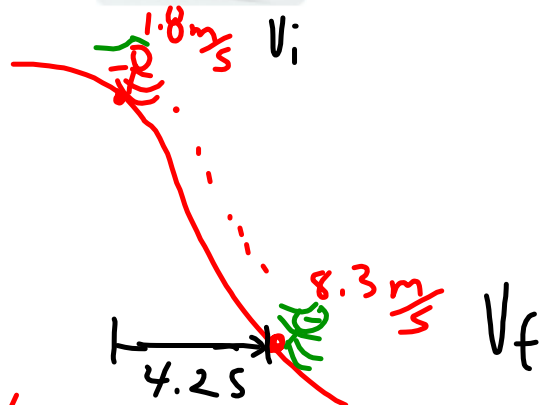
$$a = ?$$

$$t = 4.2 \text{ s}$$

$$a = \frac{\Delta V}{t}$$

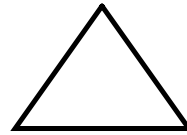
$$a = \frac{6.5 \text{ m/s}}{4.2 \text{ s}}$$

$$a = 1.5 \text{ m/s/s} \text{ or } 1.5 \text{ m/s}^2$$



Now try Textbook questions

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4.

$\Delta v =$

$a =$

$t =$

5.

$\Delta v =$

$a =$

$t =$

6.

$\Delta v =$

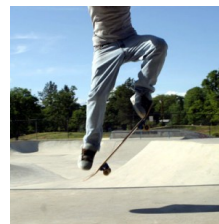
$a =$

$t =$

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6.

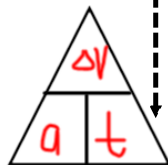
A skateboarder rolls down a hill on his board and changes his speed from rest to 1.9 m/s. If the average acceleration down the hill is 0.40 m/s^2 , for how long was the skateboarder on the hill?



$\Delta V =$

$a =$

$t =$



Show ALL steps of work p 388 text

7.

8.

9.

Try These

1. An object falls from a skyscraper and hits the ground after 5 s. The acceleration of this object due to gravity is 10 m/s^2 . What was the change in velocity of this object?

 $\Delta v =$ $a =$ $t =$ 

2. A moose sees an "intruder". How long does it take the moose, running at 1.4 m/s , to reach 2.7 m/s if it accelerates at 0.3 m/s^2 ?

 $\Delta v =$ $a =$ $t =$ 